CLAIM AMENDMENTS

Claim Amendment Summary

Claims pending

- Before this Amendment: Claims 1-26.

- After this Amendment: Claims 1-20 and 22-26.

Non-Elected, Canceled, or Withdrawn claims: 21.

Amended claims: 1-4, 12-15, 17, 20, and 22.

New claims: None.

Claims:

1.   **(Currently Amended)** A   computer   storage   media   having processor-executable instructions that, when executed by a processor, performs a method comprising:

receiving, by head-end equipment from a content provider, a digital television (DTV) application and its associated metadata, wherein the receiving is facilitated by an asset definition interface;

generating, by the head-end equipment, a data grouping having application signaling information, wherein the information is based upon the metadata associated with the DTV application;

sending, by the head-end equipment, a transmission to a DTV receiving unit, wherein such transmission comprises the data grouping, whereby the application signaling information is used by the DTV receiving unit to discover and launch the DTV application,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other.

2. **(Currently Amended)** A computer storage media as recited in claim 1, wherein the method further comprises storing, by the head-end equipment, the DTV application and its associated metadata.

3. **(Currently Amended)** A computer storage media as recited in claim 1, wherein the method further comprises constructing and formatting, by the head-end equipment, a DTV data service transmission which comprises the DTV application.

4. **(Currently Amended)** A computer storage media as recited in claim 1, wherein the method further comprises generating, by the head-end equipment, a content referencing identifier for the DTV application.

5. **(Previously Presented)** A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure embodied on the computer storage media, the structure having fields comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

6.   (Previously Presented)   A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure embodied on the computer storage media, the structure having fields consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

7.   (Previously Presented)   A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure embodied on the computer storage media, the structure having one or more fields selected from a group consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

8.   (Previously Presented)   A computer storage media as recited in claim 1, wherein the associated metadata comprises a data structure having fields selected from a group consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a profile field for indicating a minimum profile of a system on which the DTV application will execute;

a visibility field for indicating the degree of control a user has over the DTV application;

a permission field for denoting "sandbox" security permission of the DTV application; and

a rating field for indicating a rating of the DTV application.

9.   (Previously Presented)   A computer storage media having processor-executable instructions that, when executed by a processor, performs a method comprising:

receiving, by a digital television unit from head-end equipment, a transmission which includes application signal information about a digital

television (DTV) application, wherein metadata associated with the DTV application facilitates management and generation of the application signal information within the head-end equipment;

presenting a user interface (UI) configured to inform a user about the DTV application, wherein contents of the UI are based upon the received application signal information.

10. **(Previously Presented)** A computer storage media as recited in claim 9, wherein the method further comprises receiving user input via the UI.

11. **(Previously Presented)** A computer storage media as recited in claim 9, wherein the application signal information comprises a data structure embodied on a processor-readable medium, having fields selected from a group consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

12. **(Currently Amended)** A computer storage media encoded with a

~~data structure for metadata associated with a digital television (DTV) application~~ ~~received by head-end equipment from a content provider,~~ <u>A computer storage</u> <u>media as recited in claim 9, wherein the application signal information comprises</u> <u>a data structure embodied on a processor-readable medium,</u> the structure having fields comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application, wherein the metadata drives data insertion equipment at the head-end equipment.

13. **(Currently Amended)** ~~A computer storage media encoded with a~~ ~~data structure for metadata associated with a digital television (DTV) application~~ ~~received by head-end equipment from a content provider,~~ <u>A computer storage</u> <u>media as recited in claim 9, wherein the application signal information comprises</u> <u>a data structure embodied on a processor-readable medium,</u> the structure having fields selected from a group consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a profile field for indicating a minimum profile of a system on which the DTV application will execute;

a visibility field for indicating the degree of control a user has over the DTV application;

a permission field for denoting "sandbox" security permission of the DTV application; and

a rating field for indicating a rating of the DTV application, wherein the metadata drives data insertion equipment at the head-end equipment.

14. **(Currently Amended)** A method for managing digital television (DTV) application signaling, the method comprising:

receiving, by head-end equipment from a content provider, a DTV application and its associated metadata, wherein the metadata drives data insertion equipment at the head-end equipment;

constructing and formatting, by the head-end equipment, a DTV data service transmission which comprises the DTV application;

generating, by the head-end equipment, a data grouping having application signaling information, wherein the information is based upon the metadata associated with the DTV application;

application-signaling, by the head-end equipment, a DTV receiving unit via a transmission comprising the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other.

15.   (Currently Amended) A method as recited in claim 14, further comprising provisioning transmission bandwidth, by the head-end equipment, to transmit periodically the application signaling information built for the metadata.

16.   (Original) A method as recited in claim 14, wherein the metadata is part of an Extended Asset Definition Interface.

17.   (Currently Amended) A method as recited in claim 14, further comprising generating, by the head-end equipment, a content referencing identifier for the DTV application.

18.   (Original) A method as recited in claim 14, wherein the associated metadata comprises a data structure embodied on a processor-readable medium, the structure having fields comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

19.   (Original) A method as recited in claim 14, wherein the associated metadata comprises a data structure embodied on a processor-readable medium,

the structure having one or more fields selected from a group consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

20.   (Currently Amended) A digital television (DTV) application management system comprising:

a receiving means for receiving a digital television (DTV) application and its associated metadata by head-end equipment from a content provider;

a generating means, implemented in the head-end equipment, for generating a data grouping having application signaling information, wherein the information is based upon the metadata associated with the DTV application;

a sending means, implemented in the head-end equipment, for sending a transmission to a DTV receiving unit, wherein such transmission comprises the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other, and

wherein the associated metadata is part of an Extended Asset Definition Interface and comprises a data structure embodied on a computer storage media, the structure having one or more fields selected from a group consisting

of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

21.   (Cancelled)

22.   (Currently Amended) A   digital   television   (DTV)   application management system implemented in head-end equipment comprising:

an   asset   receiver   configured   to   receive   a   digital   television   (DTV) application and its associated metadata from a content provider;

an application signaling generator configured to generate a data grouping having application signaling information, wherein the information is based upon the metadata associated with the DTV application;

a transmitter configured to send a transmission to a DTV receiving unit, wherein such transmission comprises the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other.

23.   (Previously Presented)   A   system   as   recited   in   claim   22,

wherein the associated metadata comprises a data structure embodied on a computer storage media, the structure having fields comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

24.   (Previously Presented)   A system as recited in claim 22, wherein the associated metadata comprises a data structure embodied on a computer storage media, the structure having fields consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

25.   (Previously Presented)   A system as recited in claim 22, wherein the associated metadata comprises a data structure embodied on a computer storage media, the structure having one or more fields selected from a

group consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

26. **(Original)** A system as recited in claim 22, wherein the associated metadata comprises a data structure having fields selected from a group consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application;

a profile field for indicating a minimum profile of a system on which the DTV application will execute;

a visibility field for indicating the degree of control a user has over the DTV application;

a permission field for denoting "sandbox" security permission of the DTV application; and

a rating field for indicating a rating of the DTV application.